UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,917	11/02/2001	Neeraj Gulati	415	9800

			EXAMINER
22474	7590	09/21/2005	SOL, ANTHONY M

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ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/052,917	GULATI ET AL.
	Examiner	Art Unit	
	Anthony Sol	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 November 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-19</u> is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-19</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 November 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent No. 5,412,652 ("Lu") in view of U.S. Patent No. 6,343,083 B1

("Mendelson").

Regarding claim 1,

Lu discloses that the ring table includes ring provisioning tables and embedded

SONET ring path identification (Col. 7, lines 56-58; claim 1 – defining a route including a

working path for a permanent sub-network connection in the network of nodes from an

ingress node to an egress node; claim 1 – provisioning the route).

Lu discloses that during the initiation or reconfiguration of a SONET ring, a ring

table is downloaded through a communication channel and is stored in the memory in

each of the network elements (Col. 7, lines 47-50; claim 1 – distributing a route

description to each node along the route from the ingress node to the egress node;

claim 1 – configuring each node along the route in accordance with the route description

to provide data traffic services from the ingress node to the egress node).

Lu does not disclose defining a time out period to be associated with the permanent sub-network connection, the time out period defining a time over which a failure in the permanent sub-network connection is permitted to be corrected prior to a tear down of the permanent sub-network connection.

Mendelson discloses that ANC 250 of Fig. 2 periodically queries the ATU-R 22 to determine the state of the activity time-out counter. Mendelson shows in Fig. 5, at some point, in step 526, the ATU-R 222 reports that a time-out has occurred. Mendelson discloses, in response to this report, the ANC 250, in step 528, causes the ATM network 210 of Fig. 2 to tear down the VC 266, thereby releasing network resources (Col. 16, lines 5-16; claim 1 - defining a time out period to be associated with the permanent sub-network connection, the time out period defining a time over which a failure in the permanent sub-network connection is permitted to be corrected prior to a tear down of the permanent sub-network connection).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention was made to combine the sub-network system of Lu with the time-out feature of Mendelson so that the network resources can be used by the network for other connections as necessary. One skilled in the art would have been motivated to combine Lu with Mendelson (collectively "Lu-Mendelson") to generate the claimed invention with a reasonable expectation of success.

3.   Regarding claims 2-5,

Lu-Mendelson discloses a method that covers all the limitations of the parent

claim.

Lu-Mendelson discloses that the ring table (DTL) is updated, as necessary,

through network element to network element and/or network element to OSS

communications using standard communication protocols and messages (signaling)

(Lu, Col. 6, lines 3-6; claim 2 – receiving an explicit route definition from a user defining

the working path; claim 3 – dynamically determining a working path including signaling

nodes in the network to determine an optimal route between the ingress node and the

egress node; claim 4 – creating a DTL to describe the route; claim 5 – distributing the

DTL to all other nodes along the route).

4.   Regarding claims 6, 7, and 10,

Lu-Mendelson discloses a method that covers all the limitations of the parent

claim.

Lu-Mendelson discloses that in addition to providing path provisioning

information and node provisioning information, the ring provisioning table also provides

time slot interchange (TSI) information. Lu-Mendelson further discloses that in order to

provide TSI information, the same SONET ring path ID will appear at different rows/time

slots under the same column of a node to indicate that it was dropped from a first

channel and added to a different channel (Lu, Col. 12, lines 9-16; claim 6 – determining

if a proposed route satisfies network constraints; claim 7 – determining if resources are

available in each node in a proposed route; claim 10 – determining if a proposed route

satisfies predetermined node requirements for each node in the proposed route).

5.   Regarding claim 8,

Lu-Mendelson discloses a method that covers all the limitations of the parent

claim.

Lu-Mendelson discloses that the ring table (DTL) is updated, as necessary,

through network element to network element and/or network element to OSS

communications using standard communication protocols and messages (signaling).

Lu-Mendelson further discloses that the ring table is capable of supporting SONET ring

management functions including autoprovisioning (Lu, Col. 6, lines 3-9; claim 8 -

determining if resources are available includes signaling each node in the proposed

route to determine if resources are available in each respective node).

6.   Regarding claim 9,

Lu-Mendelson discloses a method that covers all the limitations of the parent

claim.

Lu-Mendelson discloses that ANC 250 of Fig. 2 periodically queries the ATU-R

22 to determine the state of the activity time-out counter. Mendelson shows in Fig. 5, at

some point, in step 526, the ATU-R 222 reports that a time-out has occurred.

Mendelson discloses, in response to this report, the ANC 250, in step 528, causes the

ATM network 210 of Fig. 2 to tear down the VC 266, thereby releasing network

resources (Mendelson, Col. 16, lines 5-10; claim 9 - determining an amount of time to

wait prior to clearing resources for the route after a failure has been detected along the route). .

7.   Regarding claim 11 and 13,

Lu-Mendelson discloses a method that covers all the limitations of the parent claim.

Lu-Mendelson discloses that the adapter needs to be able to determine whether the destination is reachable at all over the network, and if so, what address, quality of service, security parameters and other parameters to use in establishing a new VC (Mendelson, Col. 3, lines 58-61; claim 11- quality of service requirements for a given node; claim 13 - determining if no route can be defined that satisfies the network and node requirement, and not provisioning the route).

8.   Regarding claim 12,

Lu-Mendelson discloses a method that covers all the limitations of the parent claim.

Lu-Mendelson discloses that when an adapter accepts a packet from a network, the adapter needs to be able to determine whether to transmit it on the connection-oriented network over an existing connection or to create a new connection, and if the latter, which connection-oriented network endpoint to target and what parameters should be used in the new connection (Mendelson, Col. 3, lines 47-52; claim 12 -

determining if the route can be provisioned, and if not, automatically calculating a

working path that satisfies network and node requirements).

9.   Claims 17 - 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Mendelson in view of Lu.

        Regarding claim 17,

        Mendelson discloses a method that covers all the limitations of the parent

claim.

        Mendelson does not disclose storing route information associated with the

permanent sub-network connection prior to tear down such that at a time for restoring

the permanent sub-network connection, no optimal routing determination is required.

        Lu discloses that once the failure has been rectified (i.e., the hardware has been

repaired), normal traffic is recovered without reprovisioning the SONET ring. That is,

after the failure has been rectified, the ring table stored in the nodes are utilized to

recover or restore the normal traffic; even for the nodes directly affected by the failure.

If the failure causes a node to lose the ring table, that node can request and receive the

ring table from a neighboring node (as the ring tables stored in each of the nodes are

identical). Therefore, full recovery and autoprovisioning is realized after the hardware

failure is eliminated. This recovery is performed without intervention from any outside

management systems (Col. 13, lines 61-68; claim 17 - storing route information

associated with the permanent sub-network connection prior to tear down such that at a

time for restoring the permanent sub-network connection, no optimal routing

determination is required).

It would have been prima facie obvious to one of ordinary skill in the art at the

time of the invention was made to combine the connection-oriented network having a

time-out feature as taught by Mendelson with the autoprovisioning feature of the

SONET ring as taught by Lu so that the recovery is performed without intervention from

any outside management systems (Lu, Col. 14, lines 4-5). One skilled in the art would

have been motivated to combine Mendelson with Lu (collectively "Mendelson-Lu") to

generate the claimed invention with a reasonable expectation of success.

10.   Regarding claim 18,

Mendelson discloses that ANC 250 of Fig. 2 periodically queries the ATU-R 22 to

determine the state of the activity time-out counter. Mendelson shows in Fig. 5, at some

point, in step 526, the ATU-R 222 reports that a time-out has occurred. Mendelson

discloses, in response to this report, the ANC 250, in step 528, causes the ATM network

210 of Fig. 2 to tear down the VC 266, thereby releasing network resources (Col. 16,

lines 5-16; claim 18 - detecting a failure in the network; claim 18 - determining if a

predetermined time out period has expired since detection of the failure)

Mendelson discloses that it may be the time-out occurred because the PC 218

of Fig. 2 no longer needs to communicate with the server 266 in ISP 230. On the other

hand, it may be that the PC 218 still wishes to communicate with the server 236. In this

case, at some later time, higher level software in the PC 218 will once again begin

passing messages down the protocol stack (Col. 16, lines 17- 24; claim 18 - if the time

out period has expired, determining if the failure has been corrected).

Mendelson discloses that ANC 250 of Fig. 2 periodically queries the ATU-R 22 to

determine the state of the activity time-out counter. Mendelson shows in Fig. 5, at some

point, in step 526, the ATU-R 222 reports that a time-out has occurred. Mendelson

discloses, in response to this report, the ANC 250, in step 528, causes the ATM network

210 of Fig. 2 to tear down the VC 266, thereby releasing network resources

(Mendelson; Col. 16, lines 5-10; claim 18 - if the failure has not been corrected,

deallocating resources associated with the permanent sub network connection).

Mendelson does not disclose determining if the path includes a permanent sub-

network connection.

Lu discloses that the ring table includes ring provisioning tables and embedded

SONET ring path identification (sub-network connection) (Col. 7, lines 56-58; claim 18 –

determining if the path includes a permanent sub-network connection).

It would have been prima facie obvious to one of ordinary skill in the art at the

time of the invention was made to combine the connection-oriented network having a

time-out feature as taught by Mendelson with the ring provisioning tables as taught by

Lu so that the recovery is performed without intervention from any outside management

systems (Lu, Col. 14, lines 4-5). One skilled in the art would have been motivated to

combine Mendelson with Lu (collectively "Mendelson-Lu") to generate the claimed

invention with a reasonable expectation of success.

11.   Regarding claim 19,

Mendelson discloses that ANC 250 of Fig. 2 periodically queries the ATU-R 22 to

determine the state of the activity time-out counter. Mendelson shows in Fig. 5, at some

point, in step 526, the ATU-R 222 reports that a time-out has occurred. Mendelson

discloses, in response to this report, the ANC 250, in step 528, causes the ATM network

210 of Fig. 2 to tear down the VC 266, thereby releasing network resources (Col. 16,

lines 5-16; claim 19 - detecting a failure in the network; claim 19 – waiting a

predetermined time out period prior to clearing all resources for each permanent sub-

network connection traversing the path).

Mendelson does not disclose immediately clearing resources for all sub-network

connections traversing the path.

Lu discloses that upon the occurrence of a failure, the ring table may be revised

or modified to reflect the new provisioning of the paths (Col. 13, lines 54-56; claim 19 –

immediately clearing resources for al sub-network connections traversing the path).

It would have been prima facie obvious to one of ordinary skill in the art at the

time of the invention was made to combine the connection-oriented network detecting a

failure as disclosed by Mendelson with the ring table revision capability upon the

occurrence of a failure in the path of the SONET ring as disclosed by Lu so that minimal

data is lost by using known protection switching (Lu, Col. 13, lines 56-60). One skilled

in the art would have been motivated to combine Mendelson with Lu (collectively

"Mendelson-Lu") to generate the claimed invention with a reasonable expectation of

success.

Claim Rejections - 35 USC § 102

12.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13.   Claims 14 - 16 are rejected under 35 U.S.C. 102(e) as being anticipated by

Mendelson.

Regarding claim 14,

Mendelson discloses that ANC 250 of Fig. 2 periodically queries the ATU-R 22 to

determine the state of the activity time-out counter. Mendelson shows in Fig. 5, at some

point, in step 526, the ATU-R 222 reports that a time-out has occurred. Mendelson

discloses, in response to this report, the ANC 250, in step 528, causes the ATM network

210 of Fig. 2 to tear down the VC 266, thereby releasing network resources (Col. 16,

lines 5-16; claim 14 - detecting a failure in a path included in the permanent sub-

network connection between an ingress and egress node; claim 14 - determining if a

predetermined time out period has expired since detection of the failure)

Mendelson discloses that it may be the time-out occurred because the PC 218

of Fig. 2 no longer needs to communicate with the server 266 in ISP 230. On the other

hand, it may be that the PC 218 still wishes to communicate with the server 236. In this

case, at some later time, higher level software in the PC 218 will once again begin

passing messages down the protocol stack (Col. 16, lines 17- 24; claim 14 - if the time

out period has expired, determining if the failure has been corrected).

Mendelson discloses that ANC 250 of Fig. 2 periodically queries the ATU-R 22 to

determine the state of the activity time-out counter. Mendelson shows in Fig. 5, at some

point, in step 526, the ATU-R 222 reports that a time-out has occurred. Mendelson

discloses, in response to this report, the ANC 250, in step 528, causes the ATM network

210 of Fig. 2 to tear down the VC 266, thereby releasing network resources

(Mendelson, Col. 16, lines 5-10; claim 14 - if the failure has not been corrected,

deallocating resources associated with the permanent sub network connection).

14.   Regarding claims 15 and 16,

Mendelson discloses a method that covers all the limitations of the parent

claim.

Mendelson discloses that ANC 250 of Fig. 2 periodically queries the ATU-R 222

to determine the state of the activity time-out counter. Mendelson shows in Fig. 5, at

some point, in step 526, the ATU-R 222 reports that a time-out has occurred.

Mendelson discloses, in response to this report, the ANC 250, in step 528, causes the

ATM network 210 of Fig. 2 to tear down the VC 266, thereby releasing network

resources (Col. 16, lines 5-16; claim 15 - retrieving a time out period value associated

with the failed permanent sub-network connection and initiating a timer with the time out

period value; claim 16 - signaling, by one or more nodes in a path forming the

permanent sub-network connection between the ingress and egress nodes, to other

nodes in the path instructions to tear down the path).

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Anthony Sol whose telephone number is (571) 272-

5949. The examiner can normally be reached on M-F 7:30am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

AMS

9/15/2005

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